

ISTEP+ Mathematics Item Sampler (Beginning in Spring 2009)

Purpose

The purpose of this Item Sampler is to provide teachers and students with examples of the different types of questions that will appear on the ISTEP+ Mathematics assessment. The types of questions will include multiple choice, gridded response (for grades 6-8), constructed response, and extended response.

Teachers are also encouraged to use this information as a resource to help create other assessments and activities.

Gridded Response Items

Teachers are encouraged to use the Practice Gridded Response Test and Blank Gridded Response Sheets to familiarize students with this item format.

Constructed Response (CR) and Extended Response (ER) Items

Constructed response and extended response items will appear on the Applied Skills Assessment in March. Each CR and ER item on the Applied Skills Assessment will assess Problem Solving and one Content Standard. The Content Standards that will be assessed on the Applied Skills Assessment are indicated below.

- Grades (3-5): Number Sense, Computation, Geometry, and Measurement
- Grades (6-8): Number Sense, Computation, Measurement, Algebra and Functions

ALL STANDARDS will be assessed on the Multiple Choice Assessment in April/May!

The CR and ER items require students to show their work. It is critical for students to show their work when responding to these questions as full credit will **NOT** be awarded for correct answers with no work shown. Also, incorrect responses may receive partial credit if a correct process or other correct work is shown. Moreover, communication of mathematics is a part of Indiana's Problem Solving Standard and is critical in developing students' understanding of mathematical skills and concepts. Both CR and ER items may require students to provide an explanation or justification within the item.

Both CR and ER items will require a high level of thinking; however, the ER items may be slightly more complex. Extended response items may also take students longer to respond.

ISTEP+ Mathematics Item Sampler (Beginning in Spring 2009)

Students should be given several opportunities throughout the year to communicate their knowledge and understanding of mathematics on problems similar to the sample items. Students must also learn to show their work in a concise and organized manner and to provide valid explanations and justifications when necessary. One goal for all educators should be to challenge students to solve problems that require a high level of critical thinking in order to help them develop good problem-solving skills.

Rubrics for Constructed Response and Extended Response Items

The Scoring Rubrics for the CRs and ERs were developed in such a way as to score items more holistically and report student scores more accurately. In contrast, previous ISTEP+ mathematics rubrics were more analytic in nature and did not always allow for the scoring of student responses in a holistic manner. Previous rubrics were limited to reporting scores in terms of Problem Solving only and did not report scores based on the Content Standard assessed in the item.

This rubric will allow for the scoring of student responses both for specific details and the process shown overall. This rubric will also allow for the reporting of scores with regard to Problem Solving and the Content Standard being assessed in each item. For each CR and ER item, students will receive a score for the content being assessed and a score for problem solving. The Problem Solving score will encompass the entire process and work necessary to correctly and completely respond to the item. The Content score will be based specifically on the part of the student's response that aligns to the content being assessed.

Reference Sheet (Grades 6-8)

The ISTEP+ Mathematics Reference Sheet may be used on all Mathematics ISTEP+ tests (Grades 6-8).

- The 1st page of the reference sheet contains information for Grades 6-8.
- The 2nd page of the reference sheet contains information for Grades 7-8.

Teachers are encouraged to use the reference sheet throughout the year to familiarize students with the structure of and information contained in the reference sheet.

ISTEP+ Mathematics Item Sampler
(Beginning in Spring 2009)

Calculator Policy

Students in grades 6-8 will be allowed to use a calculator on the Applied Skills Assessment and on one session of the Multiple Choice Assessment. Students will not be allowed to use a calculator on the other session of the Multiple Choice Assessment unless specified in the student's IEP or Section 504 plan.

Please note that the prohibited calculator list is not exhaustive. Changes in technology occur at a rapid pace; thus, it is very difficult to list all of the calculators not permissible. In general, calculators with a QWERTY keyboard, a computer algebra system (CAS), and talking devices are NOT allowed. Be sure to ask your mathematics department chair if you are unsure whether a particular calculator is allowed. You may also contact the Indiana Department of Education at 317-232-9050 for further clarification.